2004/0252607

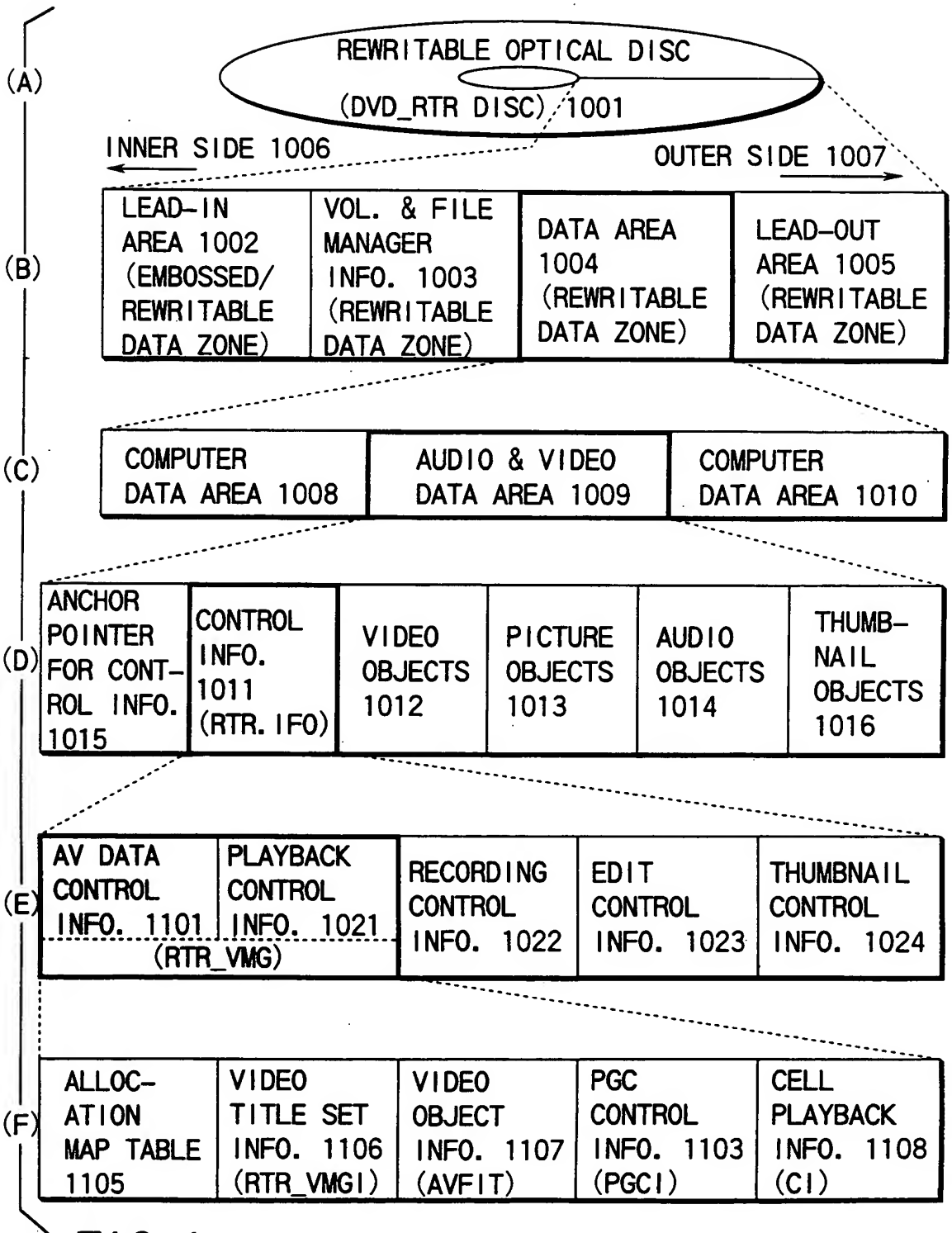



FIG. 1

2005-12-20 22:23:07

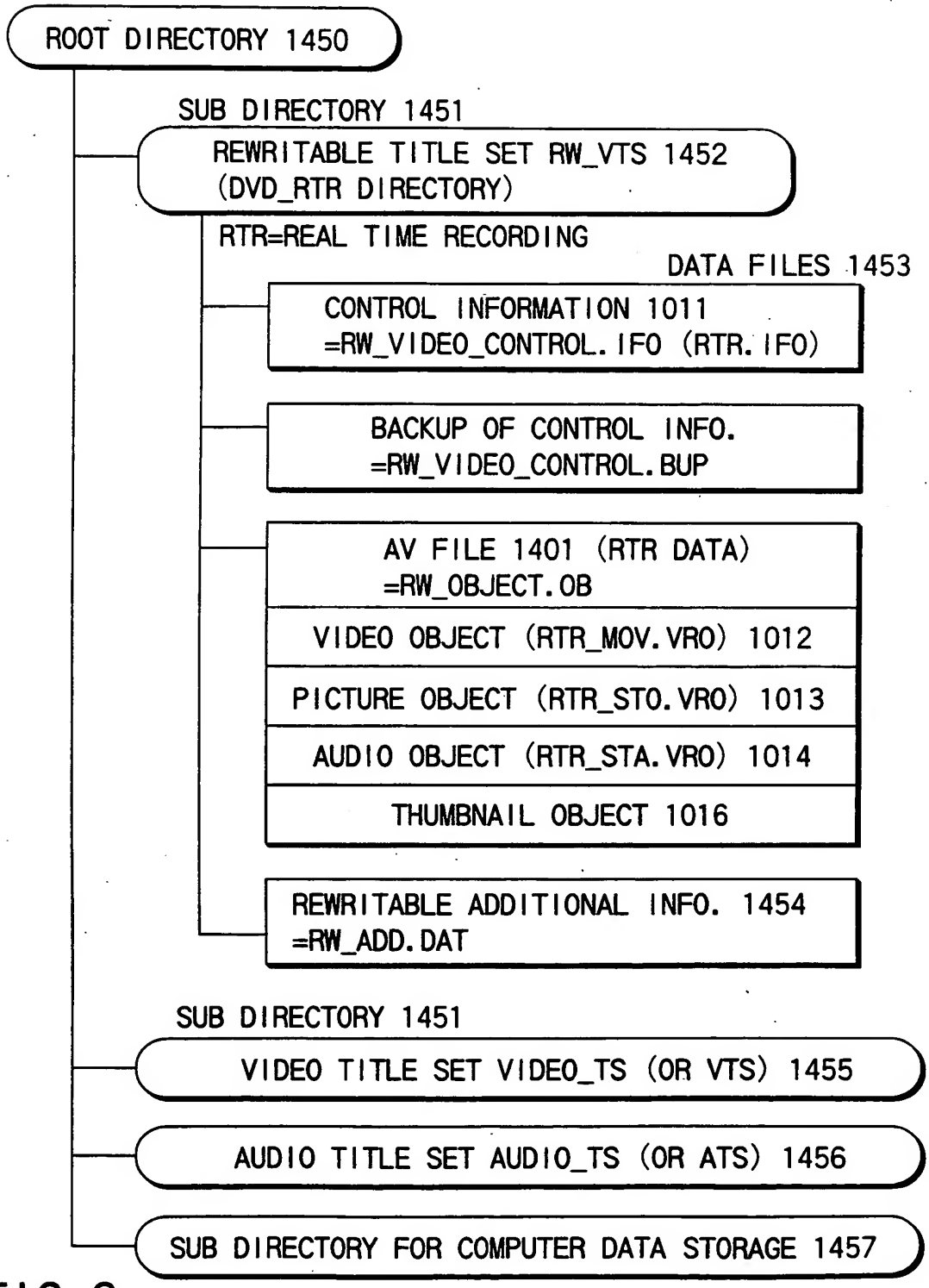



FIG. 2

2004/0027902

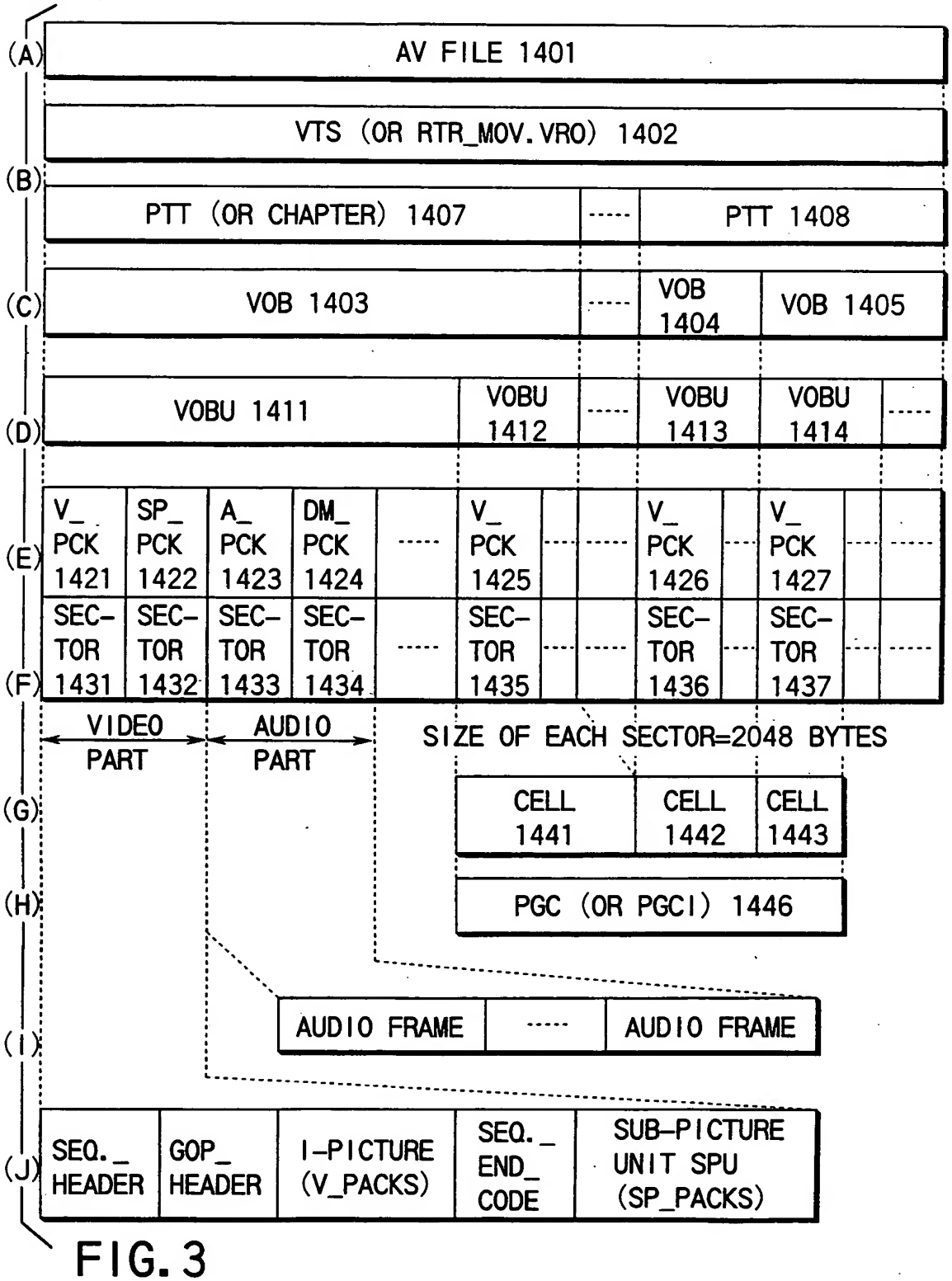



FIG. 3

20070720 7729700 1

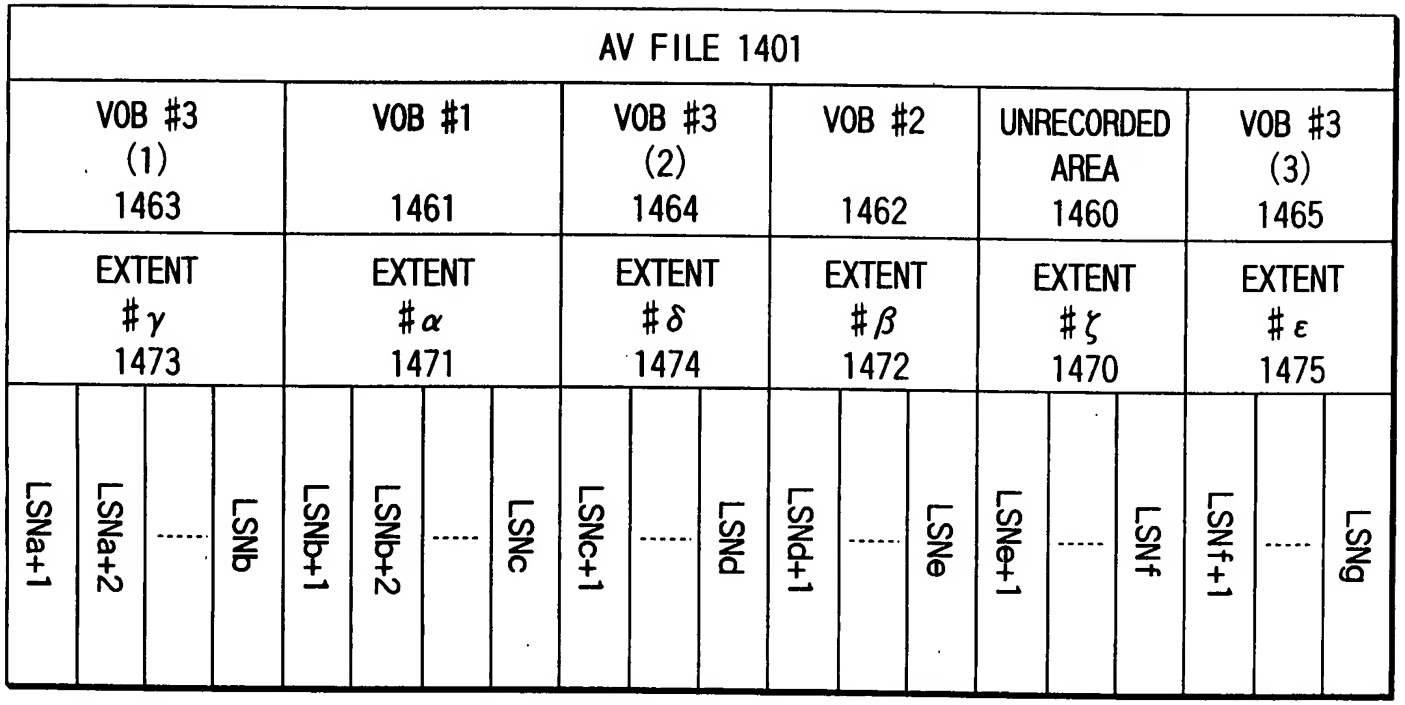



FIG. 4

OBLON SPIVAK, et al.
DOCKET # 219527US2S DIV
SHEET 4 OF 32

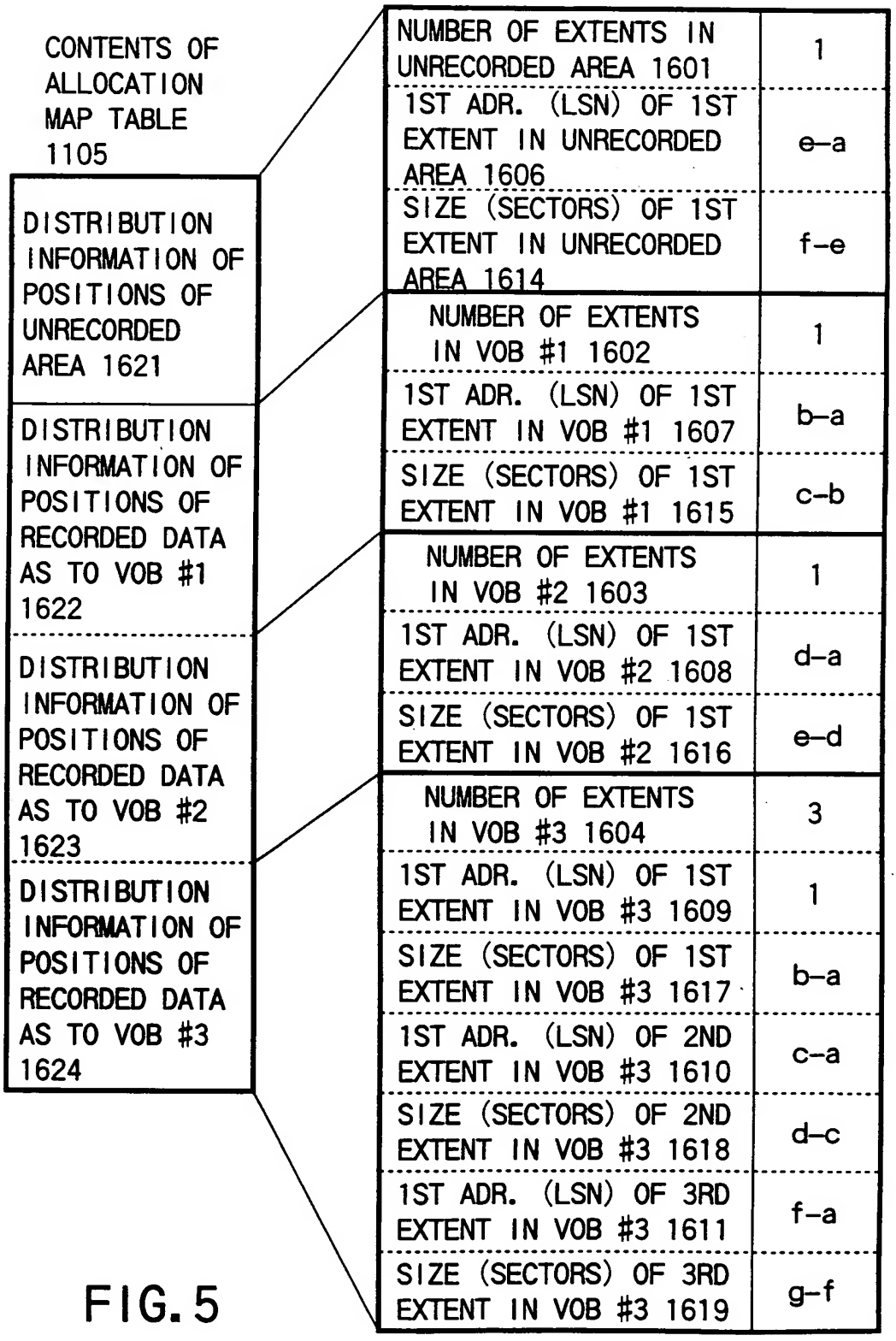
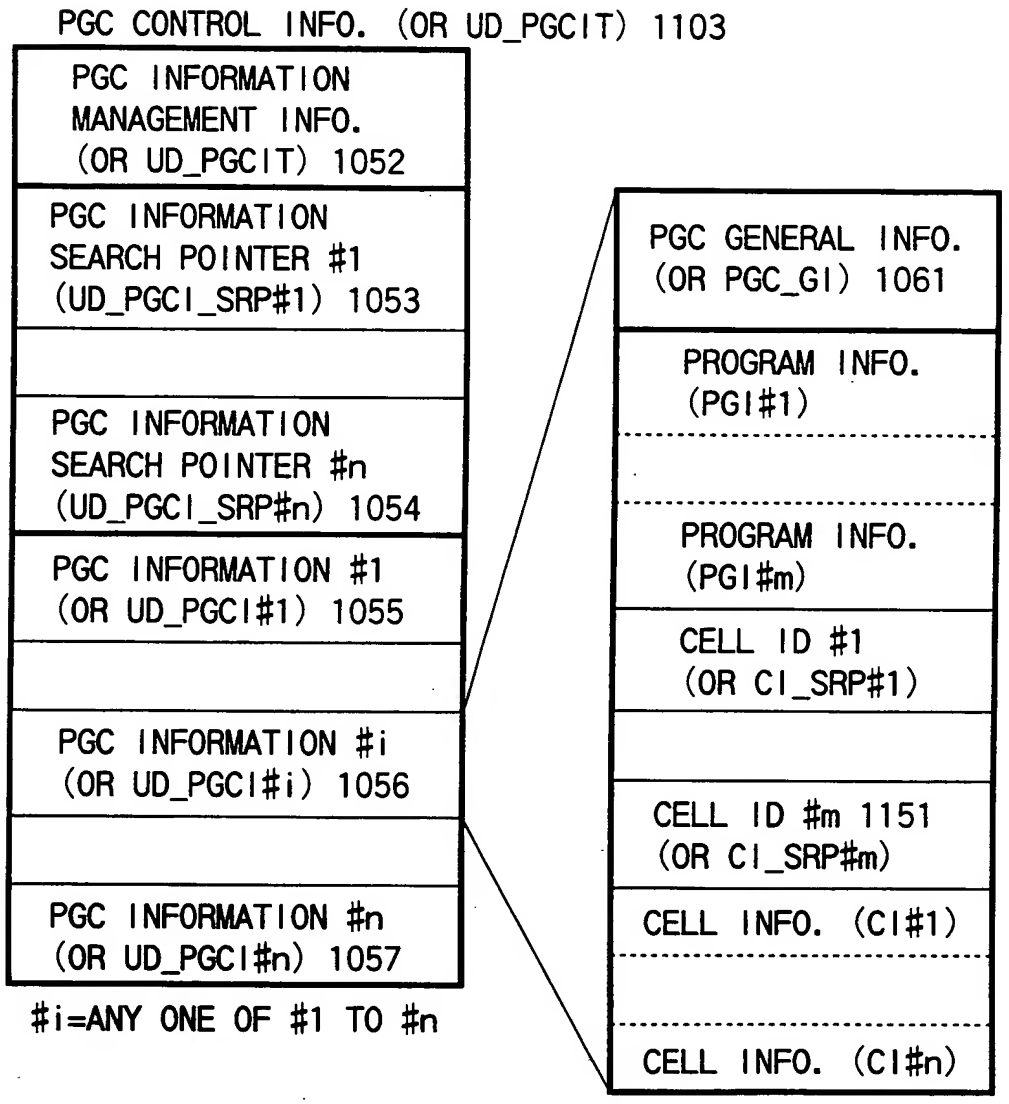



FIG. 5

10057257.025902




*1> PGC INFORMATION (OR UD_PGCI) CAN DEFINE A GROUP OF ONE OR MORE PROGRAMS;
*2> EACH PROGRAM CAN BE FORMED OF ONE OR MORE CELLS;
*3> EACH CELL CAN BE SPECIFIED BY CELL ID (OR CI_SRP);
*4> EACH CELL ID (OR CI_SRP) CAN INDICATE POSITION (OR START ADDRESS) OF CELL INFORMATION (OR CI);
*5> EACH CELL INFORMATION (OR CI) CAN DETERMINE START TIME AND END TIME OF PRESENTATION OF CELL

FIG. 6

5076274.02540

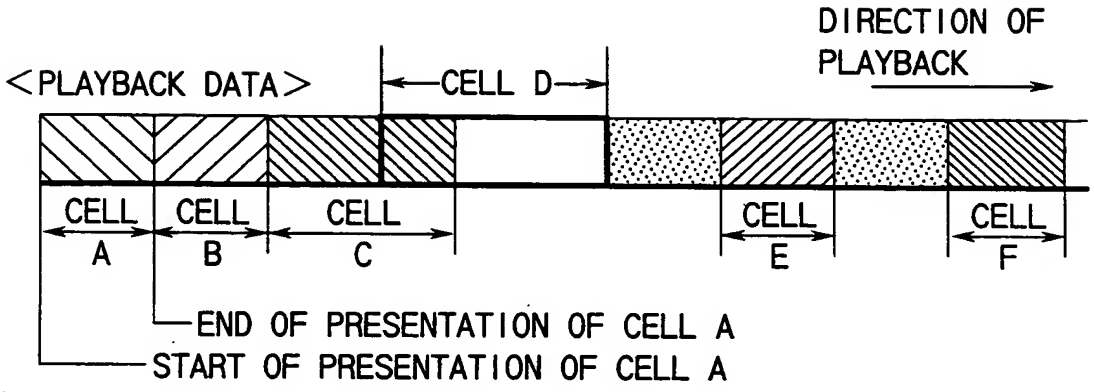



FIG. 7A

PGC INFORMATION (PGCI)

| PGC#1 1081 | | PGC#2 1082 | | PGC#3 1083 | |
|---|---|---|---|---|---|
| NUMBER OF CELLS=3 | | NUMBER OF CELLS=3 | | NUMBER OF CELLS=5 | |
| #1 | CELL A | #1 | CELL D | #1 | CELL E |
| #2 | CELL B | #2 | CELL E | #2 | CELL A |
| #3 | CELL C | #3 | CELL F | #3 | CELL D |
| —— | —— | —— | —— | #4 | CELL B |
| —— | —— | —— | —— | #5 | CELL E |
| CELL ID | CELL INFO. | CELL ID | CELL INFO. | CELL ID | CELL INFO. |
| CI_SRP #m=3 | CI #n=3 | CI_SRP #m=3 | CI #n=3 | CI_SRP #m = 5 | CI #n=4 |

FIG. 7B

EP 0 957 502 A2

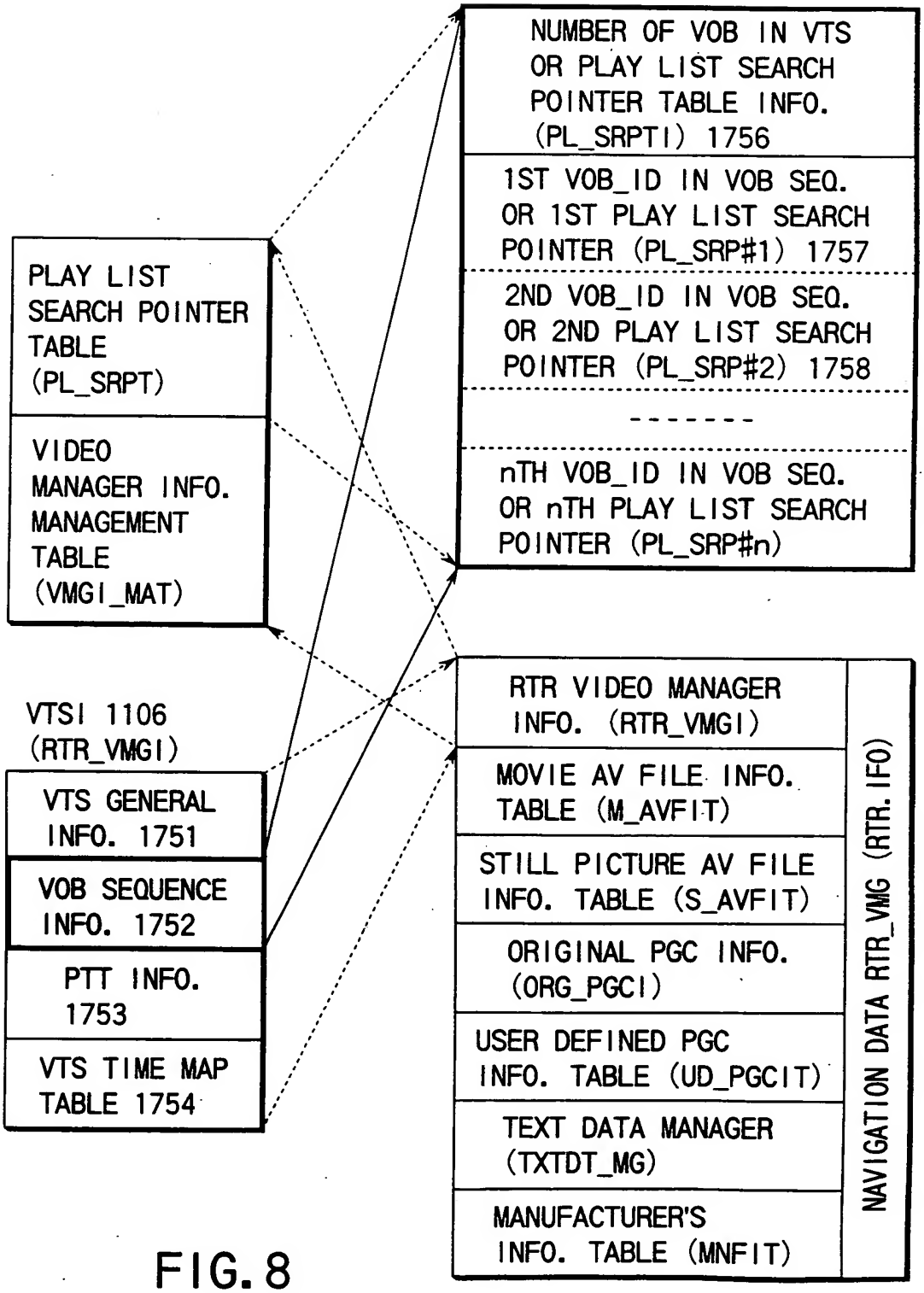

NUMBER OF VOB IN VTS OR PLAY LIST SEARCH POINTER TABLE INFO. (PL_SRPTI) 1756
1ST VOB_ID IN VOB SEQ. OR 1ST PLAY LIST SEARCH POINTER (PL_SRP#1) 1757
2ND VOB_ID IN VOB SEQ. OR 2ND PLAY LIST SEARCH POINTER (PL_SRP#2) 1758
nTH VOB_ID IN VOB SEQ. OR nTH PLAY LIST SEARCH POINTER (PL_SRP#n)
PLAY LIST SEARCH POINTER TABLE (PL_SRPT)
VIDEO MANAGER INFO. MANAGEMENT TABLE (VMGI_MAT)
VTSI 1106 (RTR_VMGI)
VTS GENERAL INFO. 1751
VOB SEQUENCE INFO. 1752
PTT INFO. 1753
VTS TIME MAP TABLE 1754
RTR VIDEO MANAGER INFO. (RTR_VMGI)
MOVIE AV FILE INFO. TABLE (M_AVFIT)
STILL PICTURE AV FILE INFO. TABLE (S_AVFIT)
ORIGINAL PGC INFO. (ORG_PGCI)
USER DEFINED PGC INFO. TABLE (UD_PGCIT)
TEXT DATA MANAGER (TXTDT_MG)
MANUFACTURER'S INFO. TABLE (MNFIT)
NAVIGATION DATA RTR_VMG (RTR. IFO)

FIG. 8

20120.7729700T

FIG. 9A

FIG. 9B

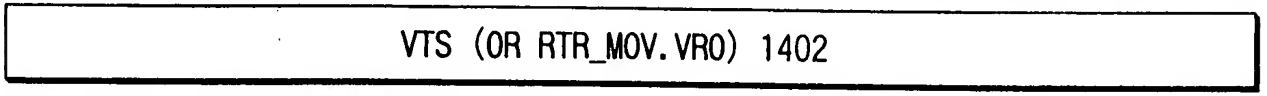



FIG. 9C

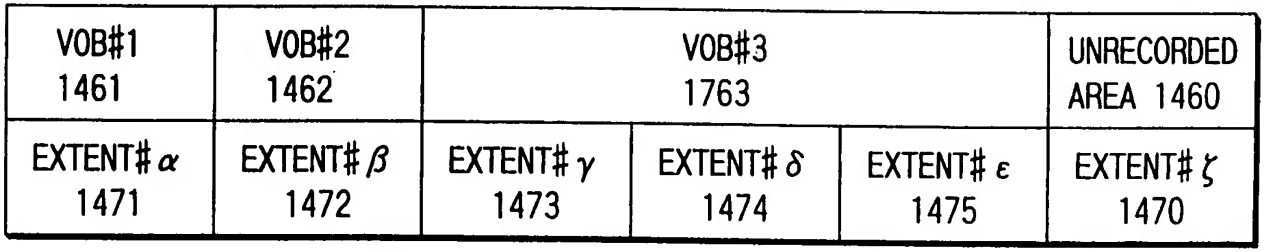



FIG. 9D

FIG. 9E

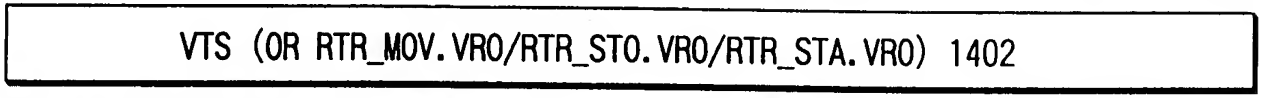
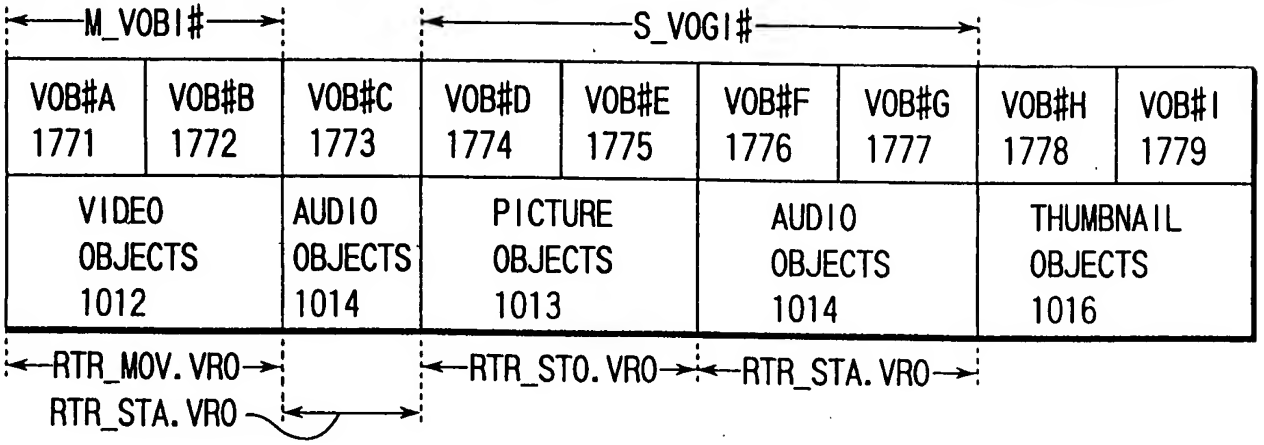



FIG. 9F




OBLON SPIVAK, et al.
DOCKET # 219527US2S DIV
SHEET 9 OF 32

20070720" 27297001

FIG. 10A

FIG. 10B

FIG. 10C

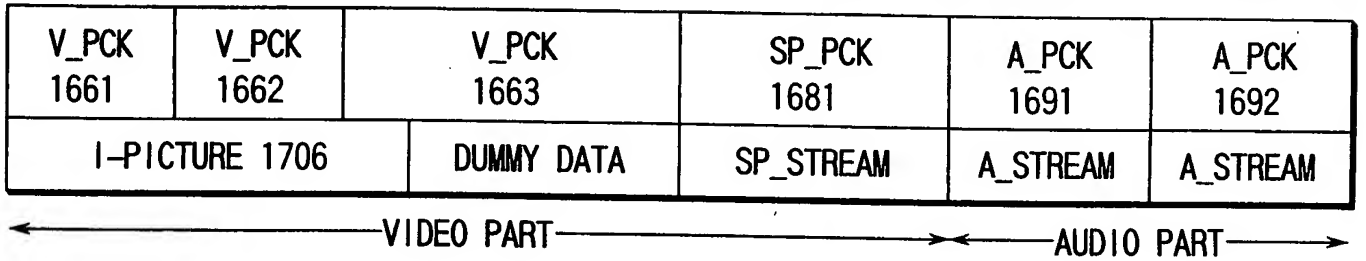



FIG. 10D

FIG. 10E

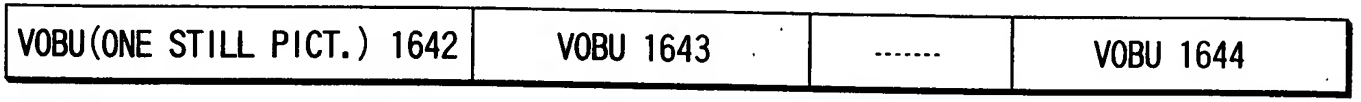
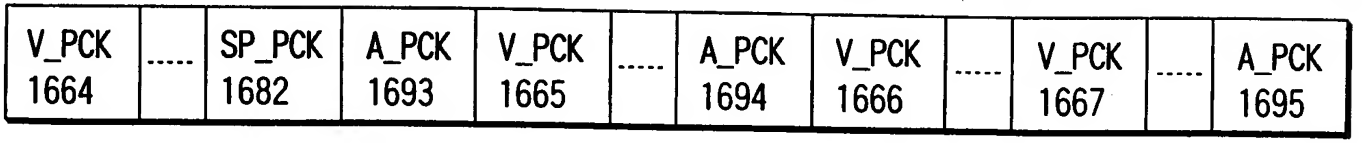



FIG. 10F

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DOCKET # 21952?US2S DIV
SHEET 10 OF 32

20070627.02297001

FIG. 10G

FIG. 10H

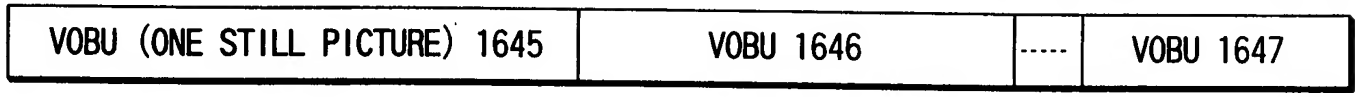



FIG. 10I

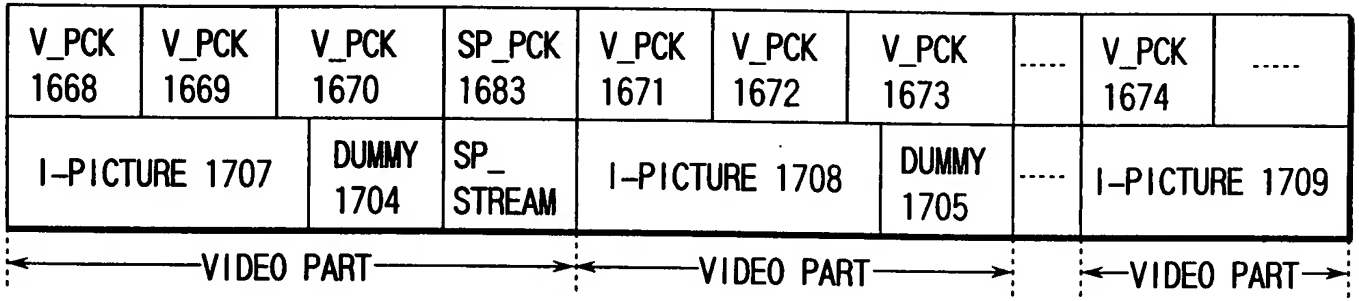
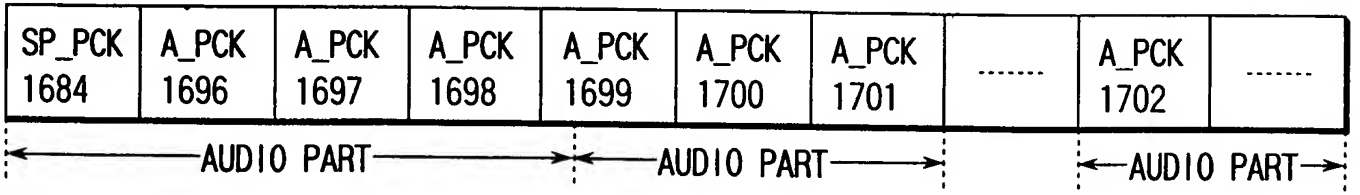



FIG. 10J

FIG. 10K

FIG. 10L




OBLON SPIVAK, et al.
DOCKET # 219527US2S DIV
SHEET 11 OF 32

EP0762702A2

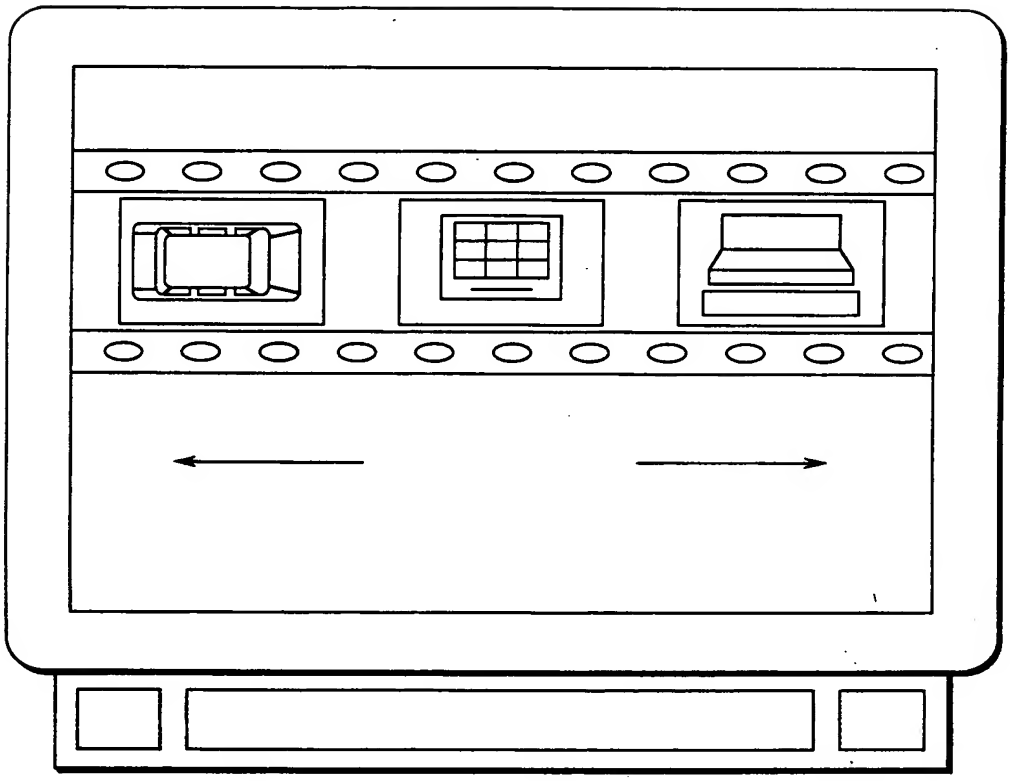


FIG. 11

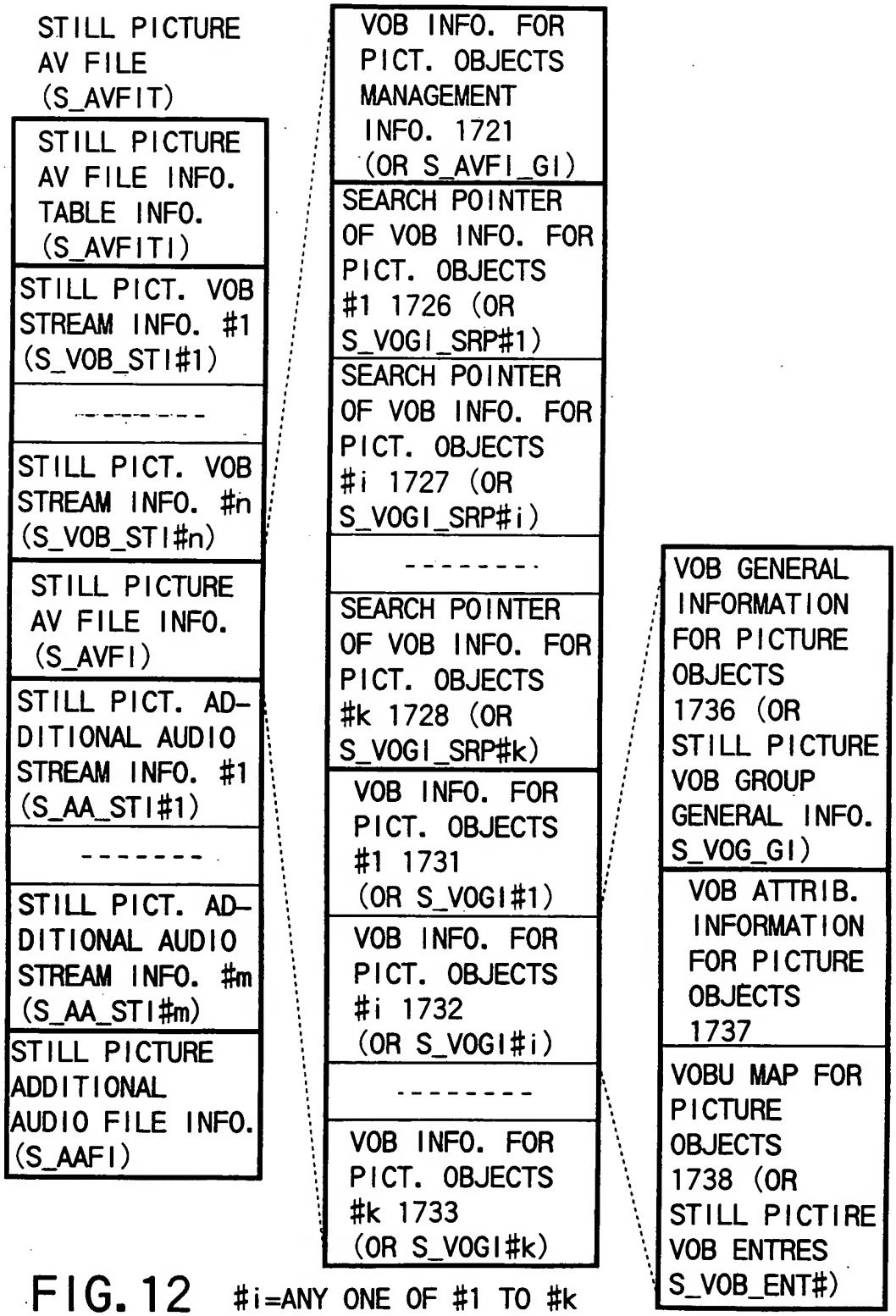



FIG. 12 #i=ANY ONE OF #1 TO #k

EP0962927A2

US007627227B2

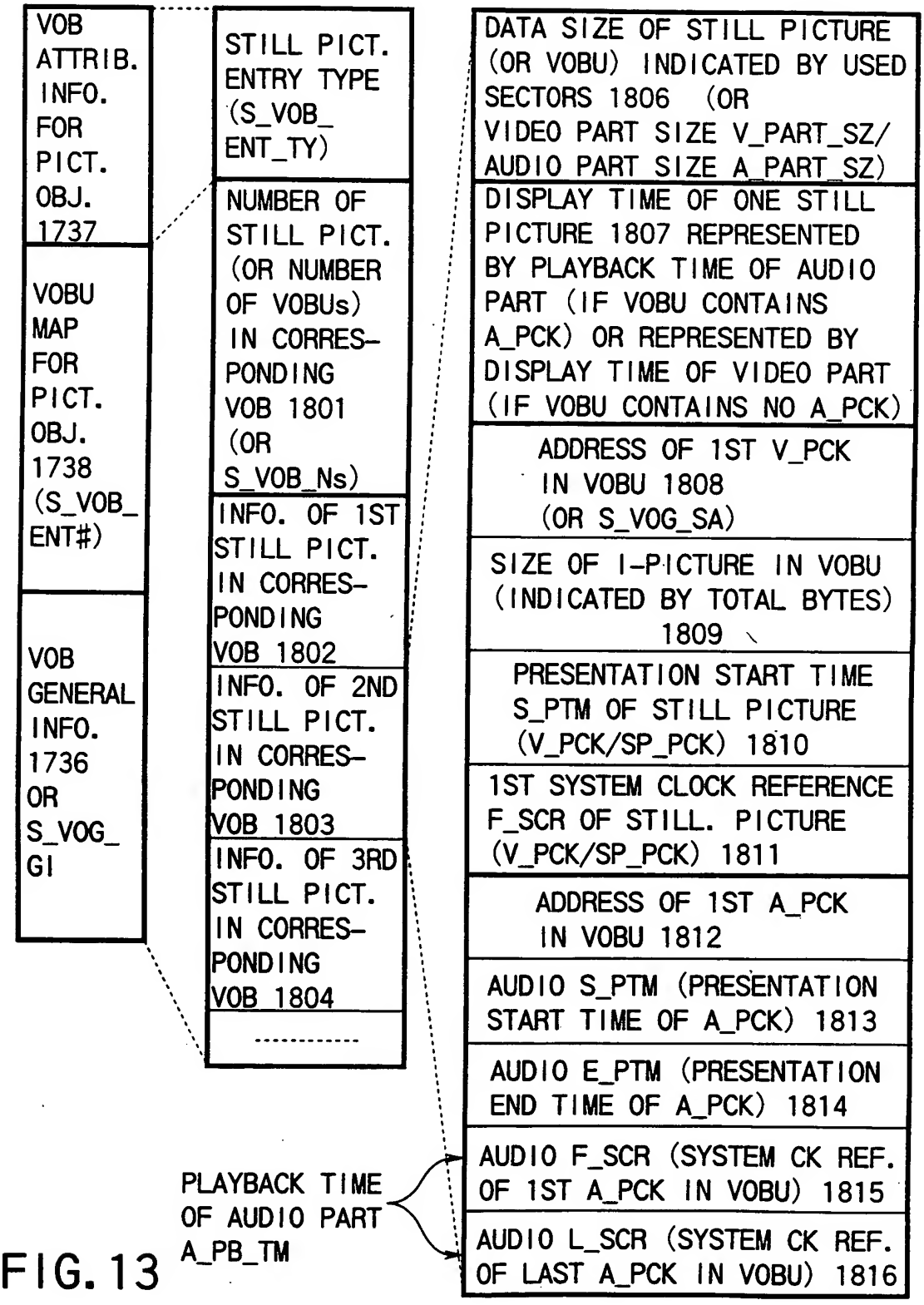



FIG. 13

OBLON SPIVAK, et al.
DOCKET # 219527US2S DIV
SHEET 15 OF 32

FIG. 14A

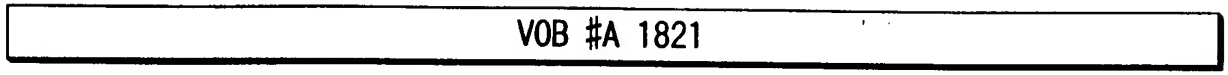



FIG. 14B

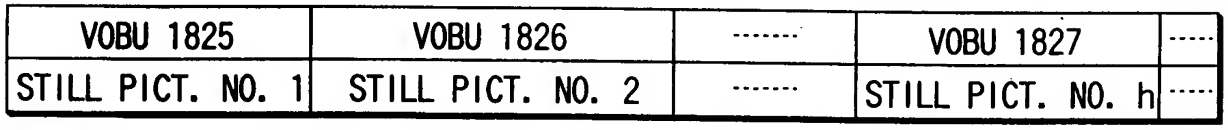



FIG. 14C

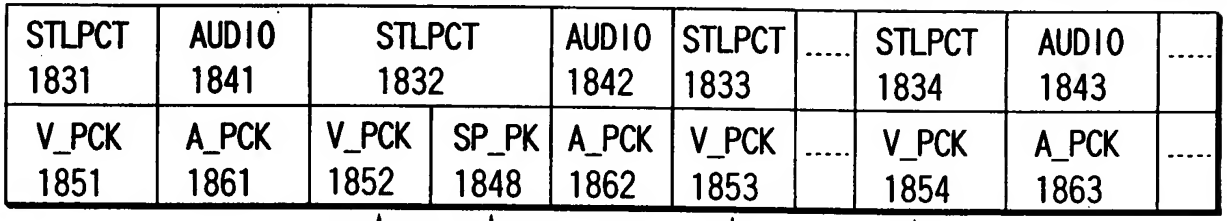



FIG. 14D

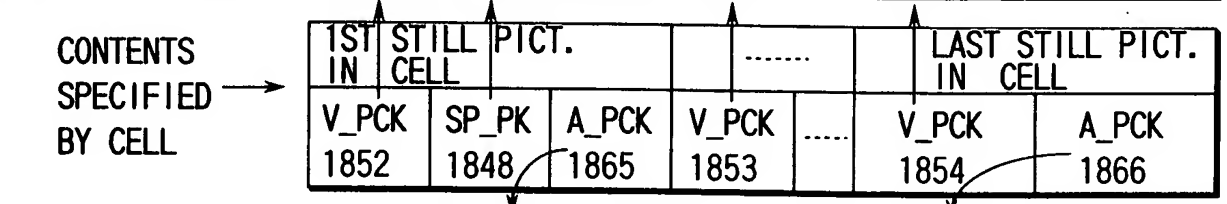



FIG. 14E

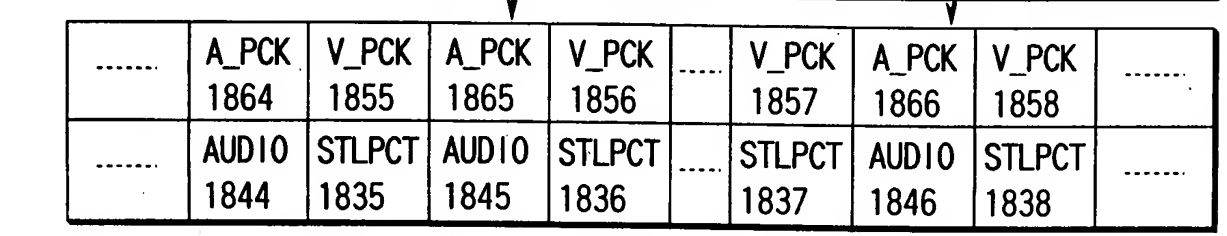



FIG. 14F

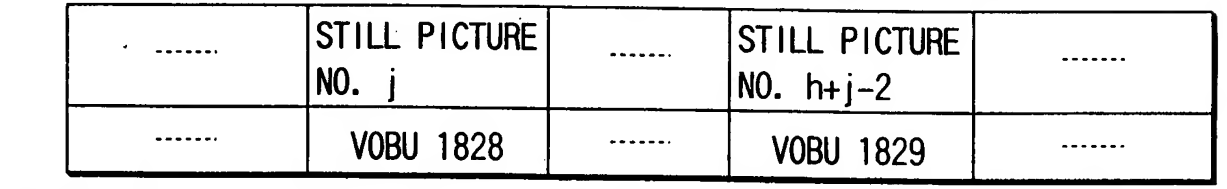
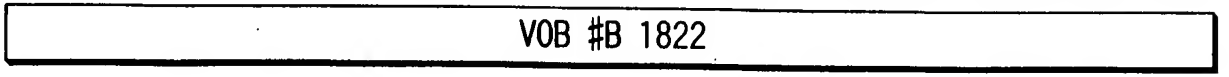



FIG. 14G



| CONTENTS (S_CI) OF CELL PLAYBACK INFO. (CI) FOR PICTURE OBJECTS 1870 | EXAMPLE 1871 WITH RESPECT TO FIG. 14 | EXAMPLE 1872 WITH RESPECT TO FIG. 14 |
|---|---|---|
| CELL ID (CI_SRP) 1873 | ——— | ——— |
| TYPE INFORMATION OF CELL (C_TY) 1880 | ——— | ——— |
| ID INFORMATION OF VOB WITH V_PCK 1874 | VOB #A | 1821 |
| STILL PICT. NUMBER 1875 IN VOB INCLUDING V_PCK OF 1ST STILL PICTURE IN CELL (S_S_VOB_ENTN) | 2 | 1826 |
| STILL PICT. NUMBER 1876 IN VOB INCLUDING V_PCK OF LAST STILL PICTURE IN CELL (E_S_VOB_ENTN) | h | 1827 |
| ID INFORMATION OF VOB WITH A_PCK 1877 | VOB #B | 1822 |
| STILL PICT. NUMBER 1878 IN VOB INCLUDING A_PCK OF 1ST STILL PICTURE IN CELL | j | 1828 |
| PRESENTATION TIME 1879 OF EACH STILL PICTURE HAVING NO CORRESPONDING A_PCK | 2 SECONDS (ONE LINE) | ——— |

FIG. 15

2004/0234207

| CONTENTS OF CELL PLAYBACK INFO. (CI) FOR PTT |
|---|
| CELL ID (CI_SRP) 1883 |
| TYPE INFO. OF CELL (C_TY) 1882 |
| ID INFO. OF PTT WITH V_PCK 1884 |
| STILL PICTURE NUMBER 1885<br>IN PTT OF VOB INCLUDING V_PCK<br>OF 1ST STILL PICTURE IN CELL |
| STILL PICTURE NUMBER 1886<br>IN PTT OF VOB INCLUDING V_PCK<br>OF LAST STILL PICTURE IN CELL |
| ID INFO. OF PTT WITH A_PCK 1887 |
| STILL PICTURE NUMBER 1888<br>IN PTT OF VOB INCLUDING A_PCK<br>OF 1ST STILL PICTURE IN CELL |
| PRESENTATION TIME 1889<br>OF EACH STILL PICT. HAVING<br>NO CORRESPONDING A_PCK |

FIG. 16

EP0782137A2

EP0782137A2

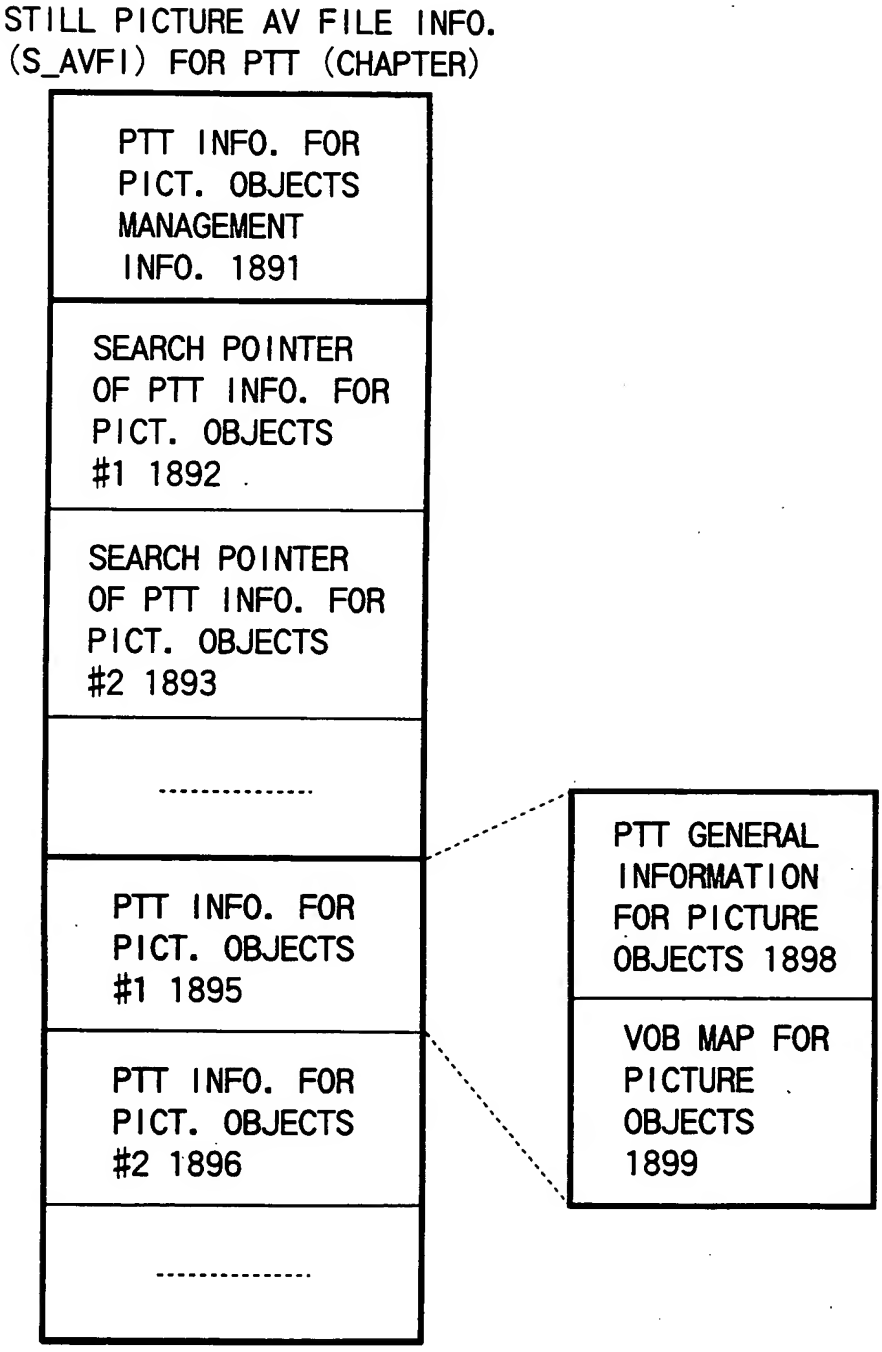



FIG. 17

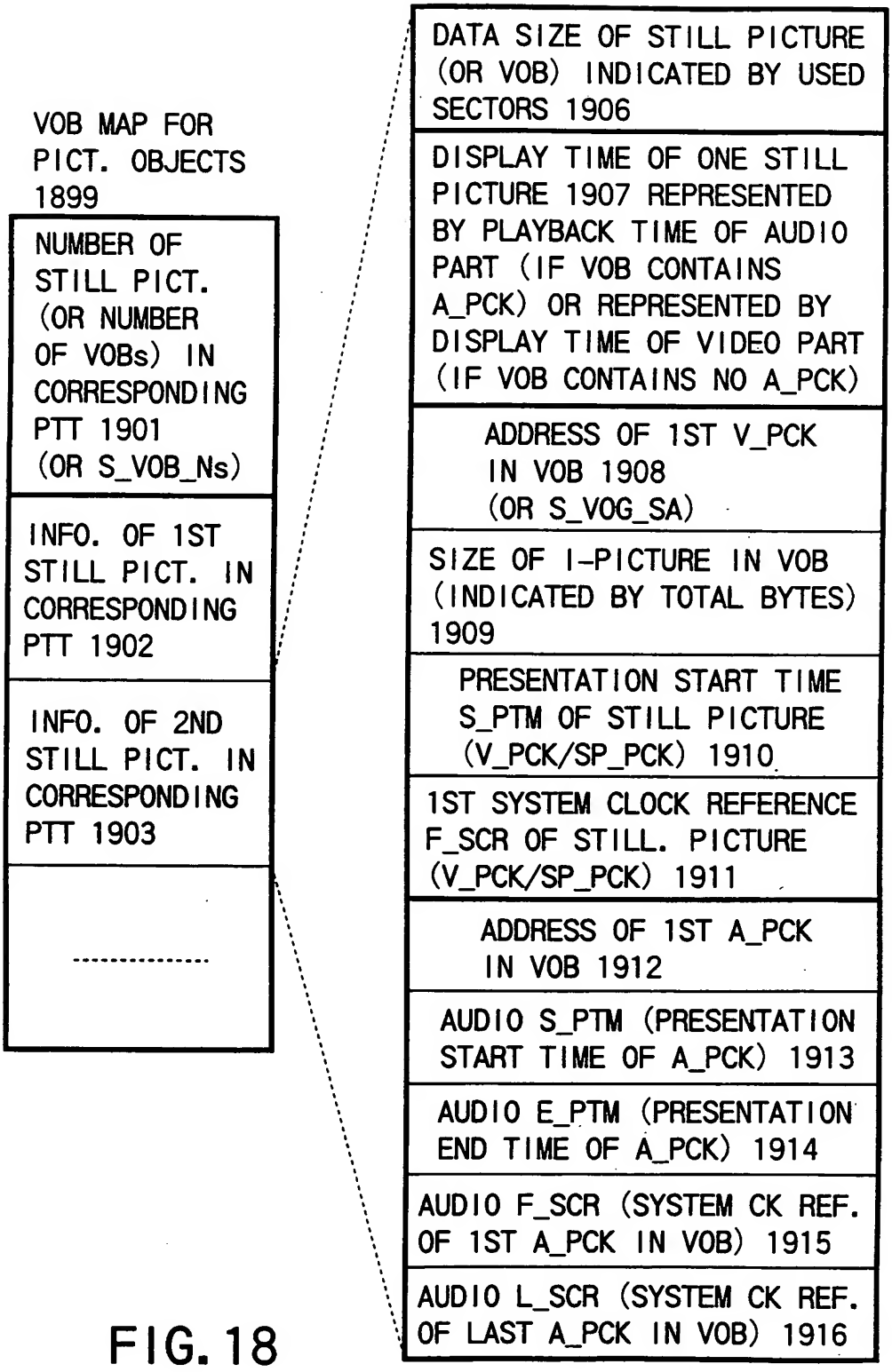



FIG. 18

EP0752702A2

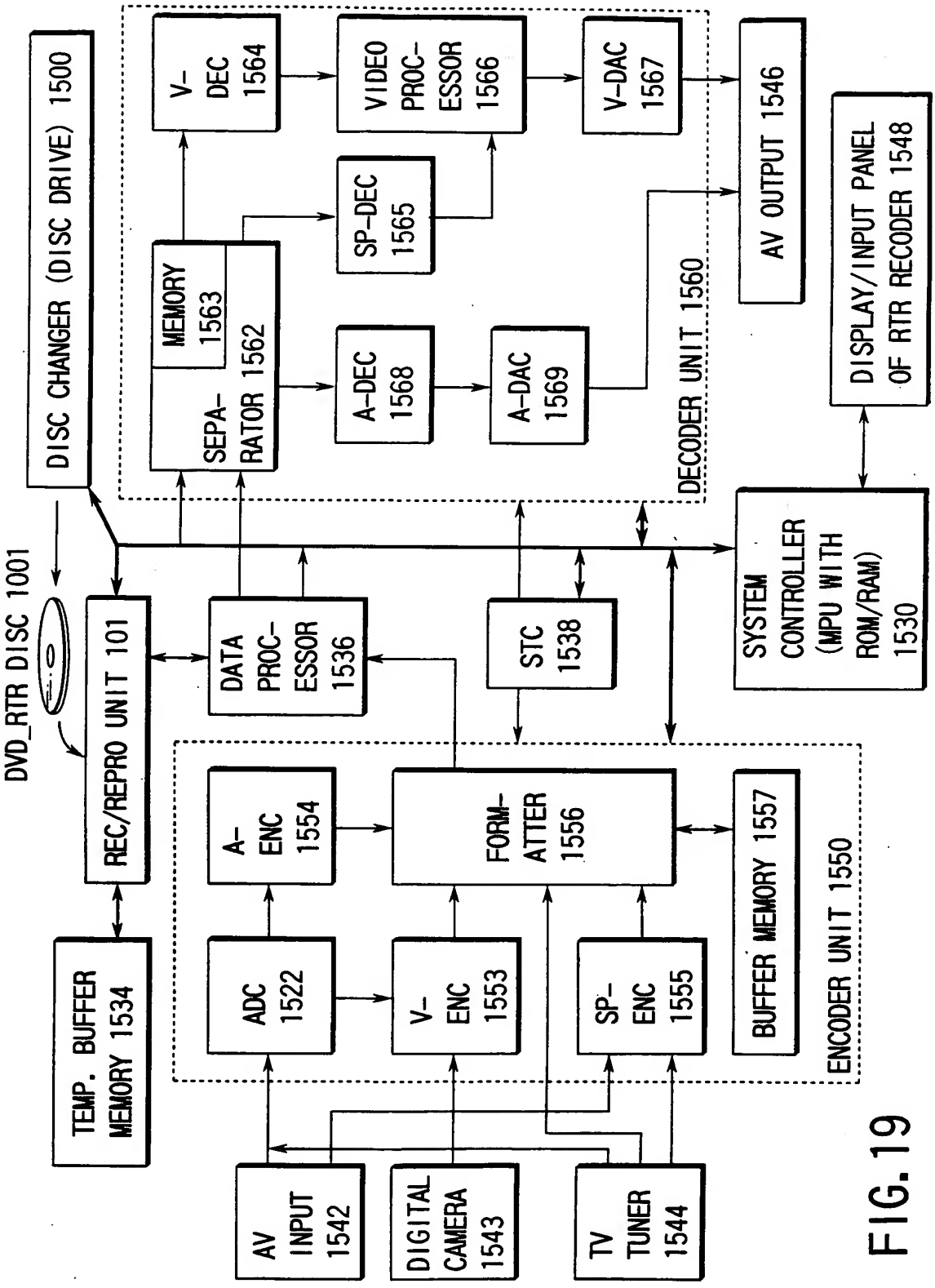

DISC CHANGER (DISC DRIVE) 1500
DVD_RTR DISC 1001
REC/REPRO UNIT 101
TEMP. BUFFER MEMORY 1534
DATA PROC-ESSOR 1536
STC 1538
SYSTEM CONTROLLER (MPU WITH ROM/RAM) 1530
DISPLAY/INPUT PANEL OF RTR RECODER 1548
DECODER UNIT 1560
V-DEC 1564
VIDEO PROC-ESSOR 1566
V-DAC 1567
AV OUTPUT 1546
SP-DEC 1565
MEMORY 1563
SEPA-RATOR 1562
A-DEC 1568
A-DAC 1569
ENCODER UNIT 1550
A-ENC 1554
FORM-ATTER 1556
BUFFER MEMORY 1557
ADC 1522
V-ENC 1553
SP-ENC 1555
AV INPUT 1542
DIGITAL CAMERA 1543
TV TUNER 1544

FIG. 19

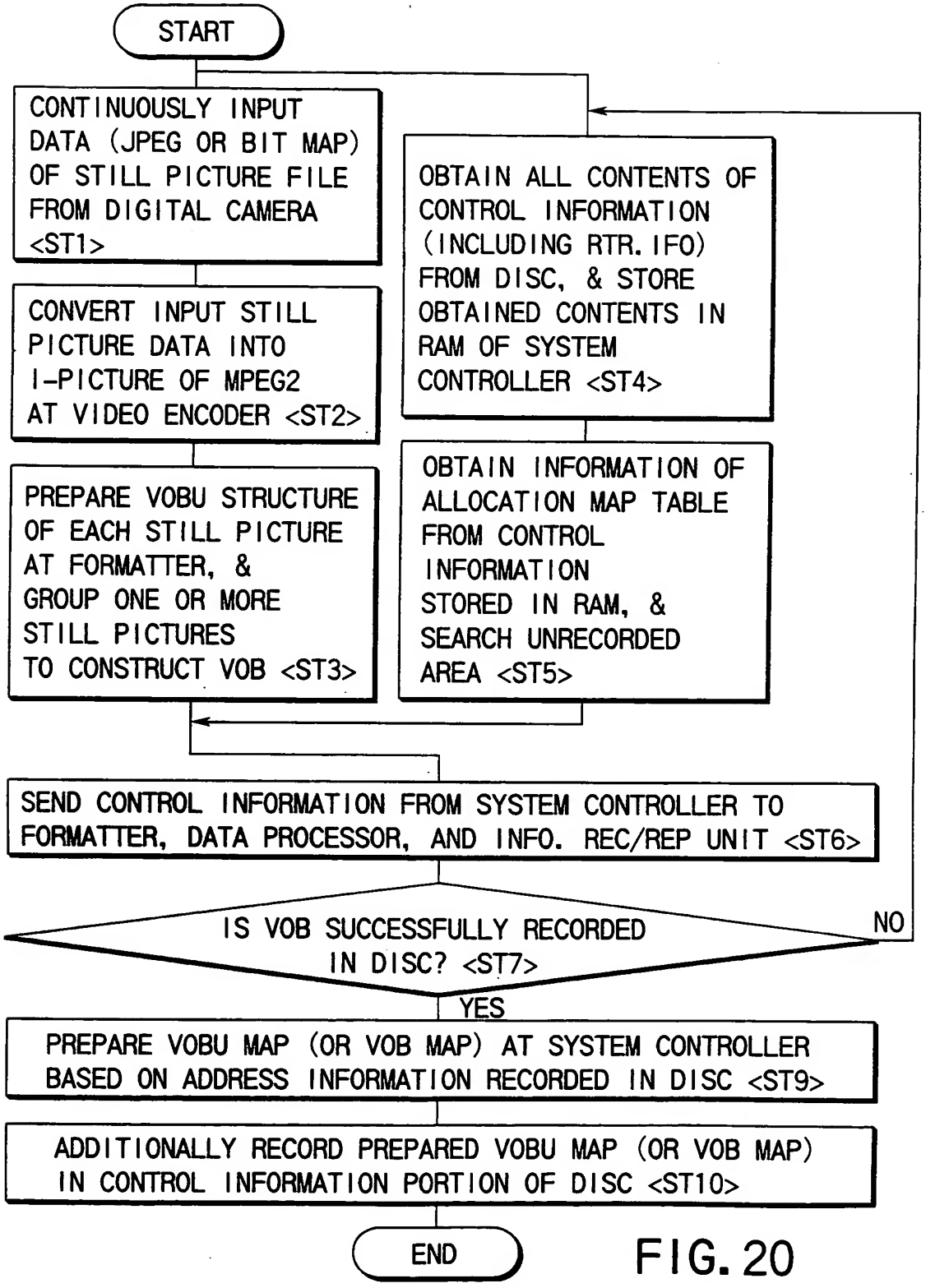



FIG. 20

1007527 - 021502

EP 0 924 707 A2

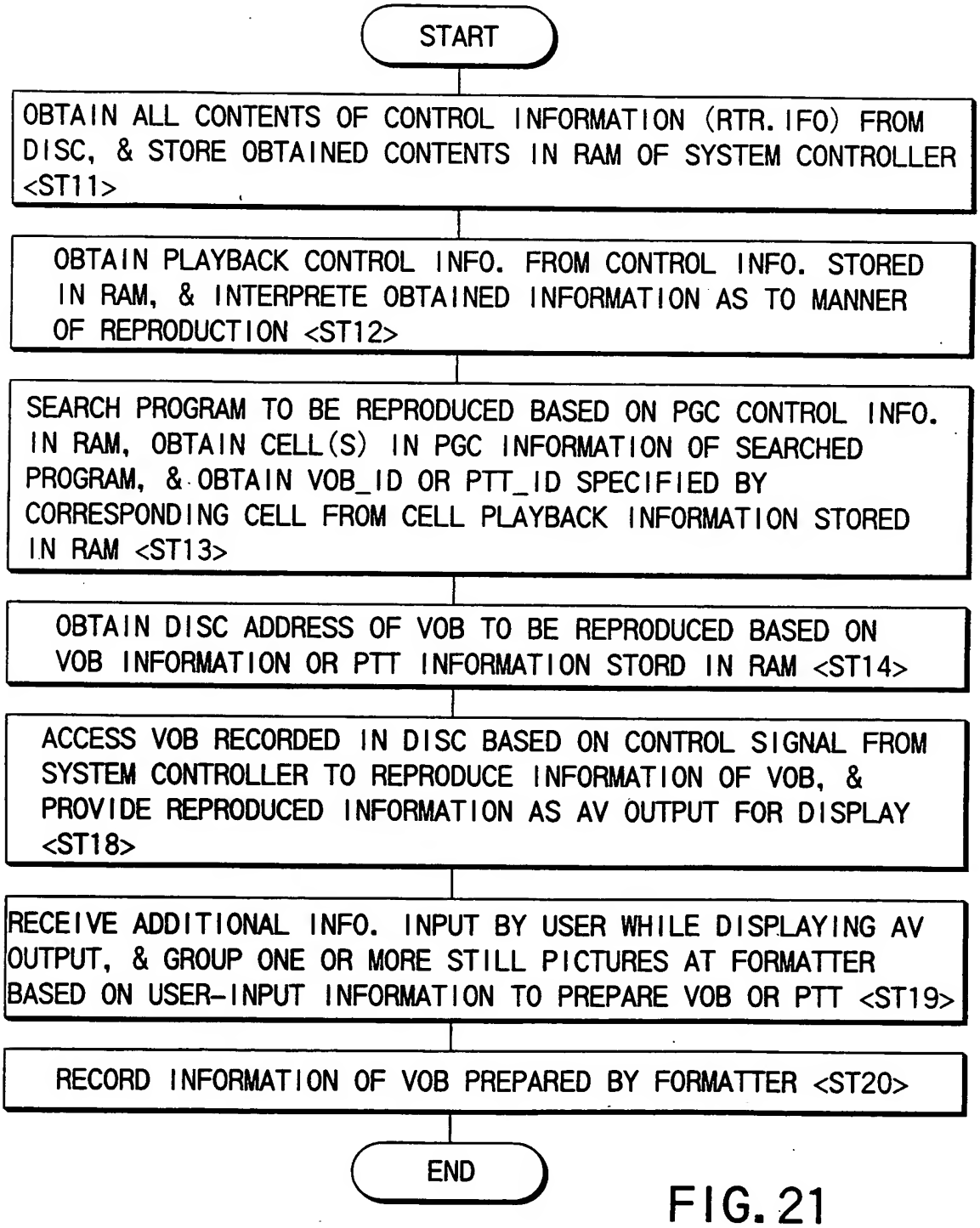



FIG. 21

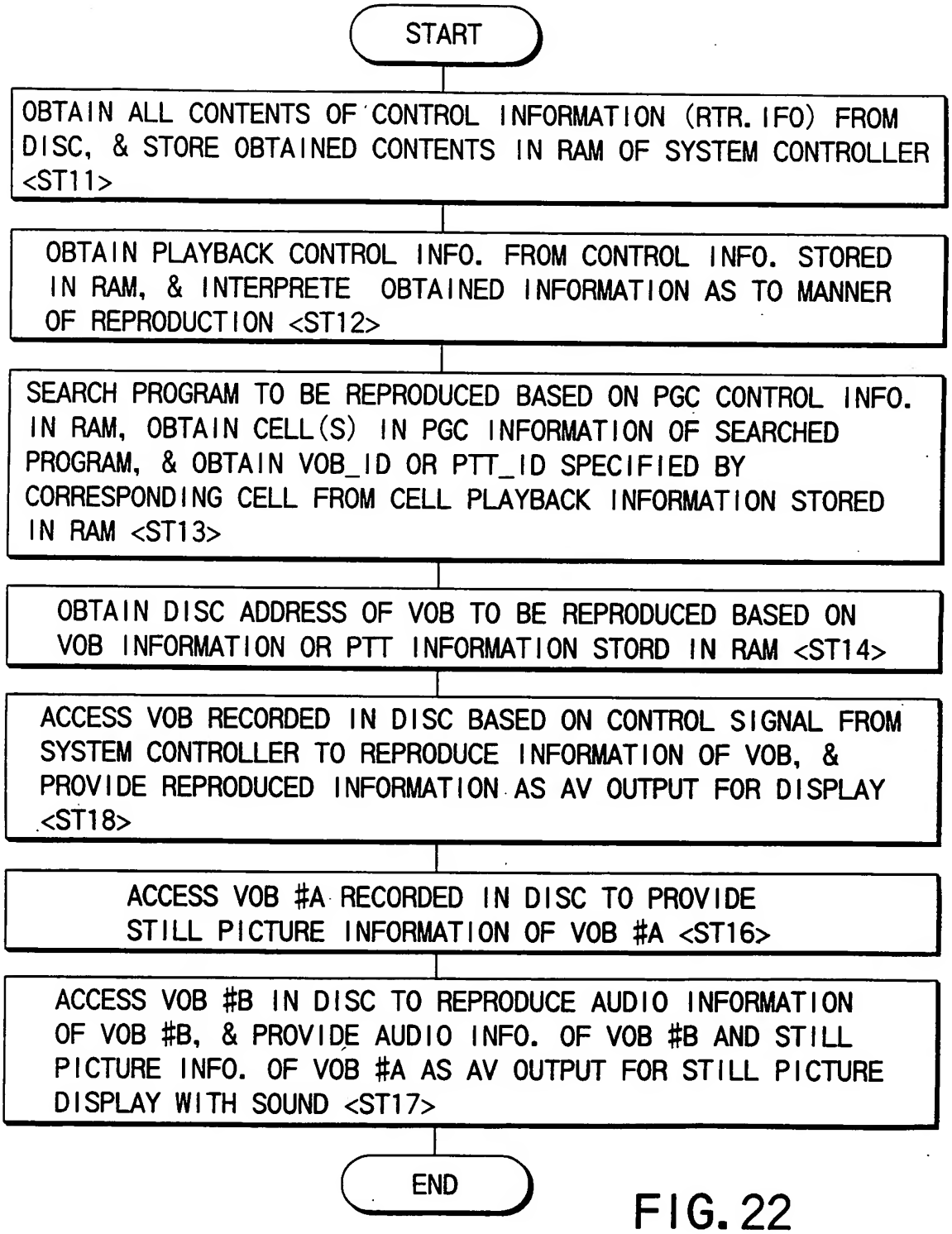



FIG. 22

5,987,209 • 021502

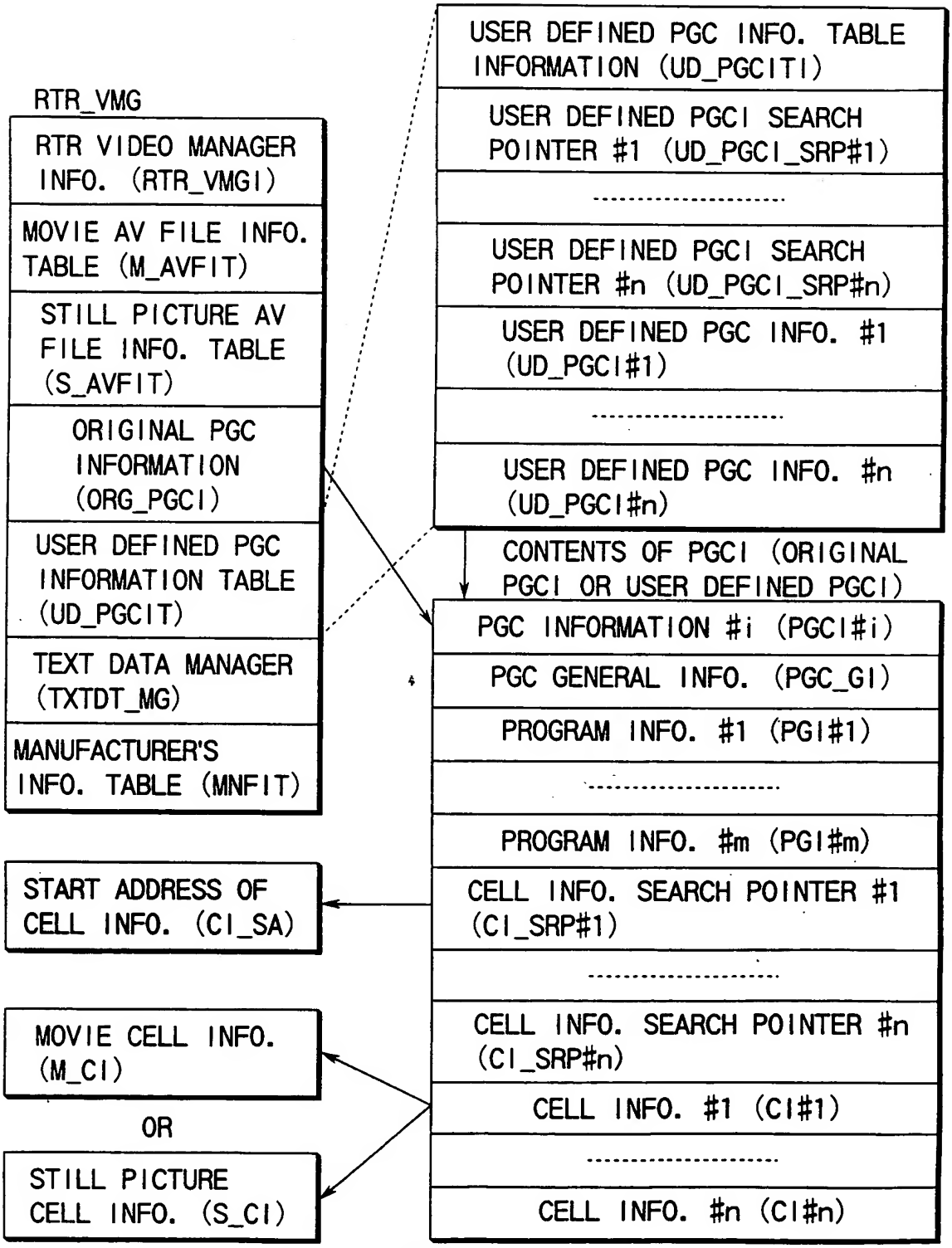



FIG. 23

5007527 "02490

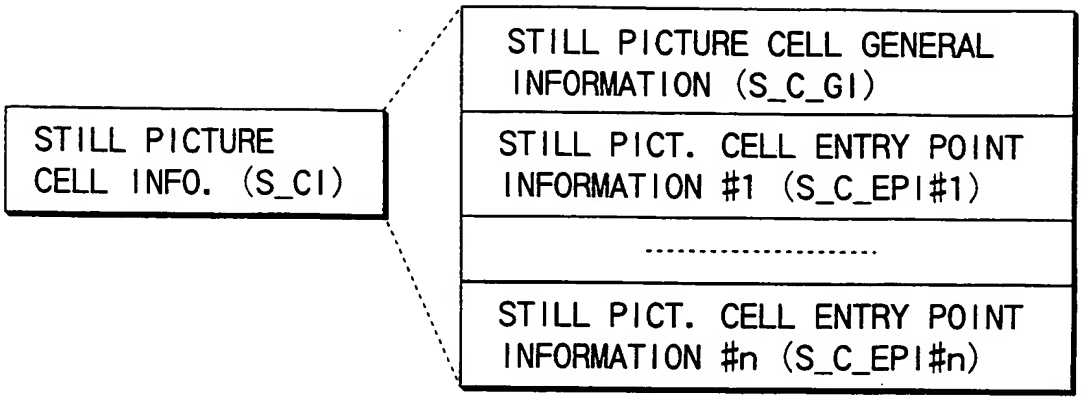



FIG. 24

CONTENTS OF S_C_GI

| FIELD NAME | CONTENTS |
|---|---|
| RESERVED | RESERVED |
| C_TY | CELL TYPE |
| S_VOGI_SRPN | S_VOGI SEARCH POINTER NUMBER |
| C_EPI_Ns | NUMBER OF CELL ENTRY POINT INFO. |
| S_S_VOB_ENTN | START S_VOB_ENT NUMBER |
| E_S_VOB_ENTN | END S_VOB_ENT NUMBER |

FIG. 25

CONTENTS OF S_C_EPI

| FIELD NAME | CONTENTS |
|---|---|
| EP_TY | ENTRY POINT TYPE |
| S_VOB_ENTN | S_VOB_ENT NUMBER |
| PRM_TXTI | PRIMARY TEXT INFORMATION |

FIG. 26

EP 1 005 027 A2

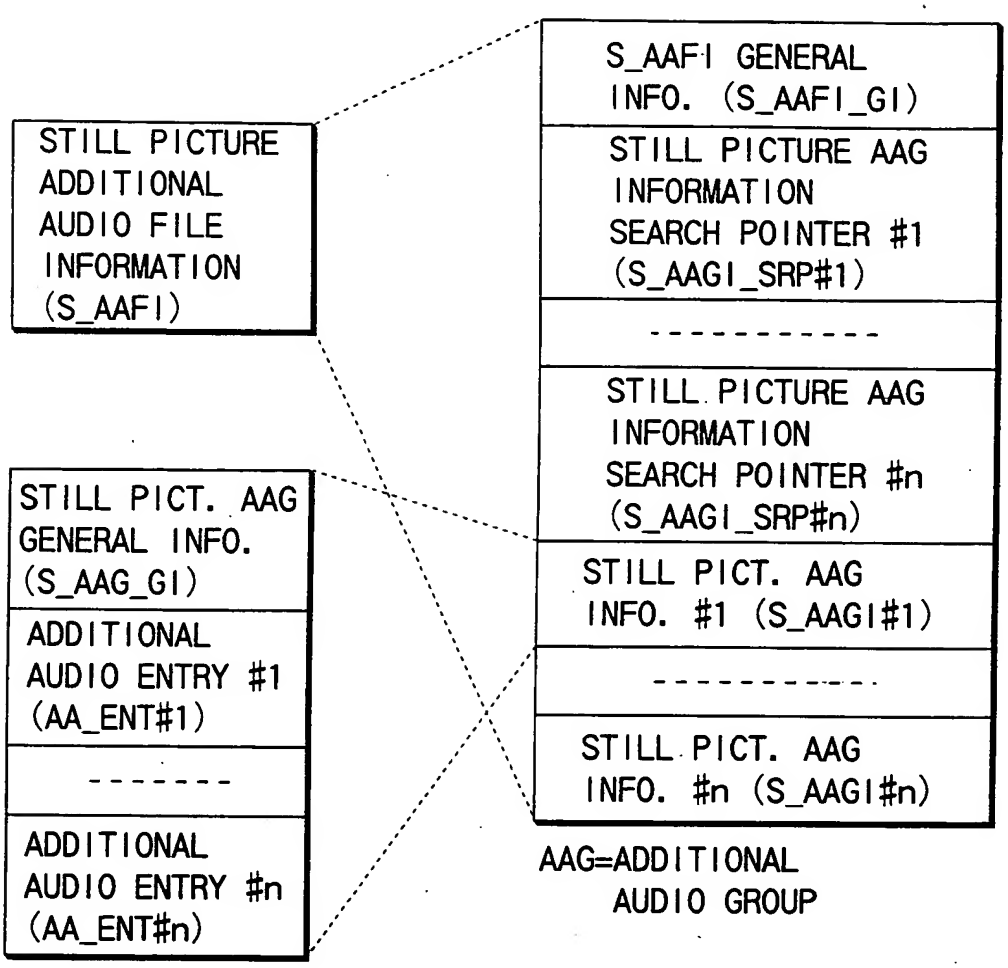



FIG. 27

CONTENTS OF S_AAG_GI

| FIELD NAME | CONTENTS |
|---|---|
| AA_ENT_Ns | NUMBER OF AA_ENT |
| S_AA_STIN | STILL PICTURE ADDITIONAL AUDIO STREAM INFORMATION NUMBER |
| S_AAG_SA | START ADDRESS OF THIS AAG IN STILL PICTURE ADDITIONAL AUDIO FILE |

FIG. 28

10076527.022502

CONTENTS OF AA_ENT

| FIELD NAME | CONTENTS |
|---|---|
| AA_TY | ADDITIONAL AUDIO TYPE |
| AA_SZ | SIZE OF ADDITIONAL AUDIO STREAM |
| AA_PB_TM | PLAYBACK TIME OF ADDITIONAL AUDIO STREAM (MEASURED BY VIDEO FIELDS) |

FIG. 29

CONTENTS OF S_VOG_GI

| FIELD NAME | CONTENTS |
|---|---|
| S_VOB_Ns | NUMBER OF S_VOBs |
| S_VOB_STIN | STILL PICTURE VOB STREAM INFORMATION NUMBER |
| FIRST_VOB_REC_TM | TIME WHEN THE FIRST VOB IN THIS VOB GROUP WAS RECORDED |
| LAST_VOB_REC_TM | TIME WHEN THE LAST VOB IN THIS VOB GROUP WAS RECORDED |
| S_VOG_SA | START ADDRESS OF THIS VOB GROUP IN STILL PICTURE AV FILE |

FIG. 30

CONTENTS OF S_VOB_ENT (TYPE 1)

| FIELD NAME | CONTENTS |
|---|---|
| S_VOB_ENT_TY | STILL PICTURE VOB ENTRY TYPE |
| V_PART_SZ | SIZE OF VIDEO PART |

FIG. 31

10075277.021502

CONTENTS OF S_VOB_ENT (TYPE 2)

| FIELD NAME | CONTENTS |
|---|---|
| S_VOB_ENT_TY | STILL PICTURE VOB ENTRY TYPE |
| V_PART_SZ | SIZE OF VIDEO PART |
| A_PART_SZ | SIZE OF ORIGINAL AUDIO PART |
| A_PB_TM | PLAYBACK TIME OF AUDIO PART (DESCRIBED IN VIDEO FIELDS) |

FIG. 32

CONTENTS OF S_VOB_ENT (TYPE 3)

| FIELD NAME | CONTENTS |
|---|---|
| S_VOB_ENT_TY | STILL PICTURE VOB ENTRY TYPE |
| V_PART_SZ | SIZE OF VIDEO PART |
| S_AAGN | ADDITIONAL AUDIO GROUP NUMBER |
| AA_ENTN | AA_ENT NUMBER |

FIG. 33

CONTENTS OF S_VOB_ENT (TYPE 4)

| FIELD NAME | CONTENTS |
|---|---|
| S_VOB_ENT_TY | STILL PICTURE VOB ENTRY TYPE |
| V_PART_SZ | SIZE OF VIDEO PART |
| A_PART_SZ | SIZE OF ORIGINAL AUDIO PART |
| A_PB_TM | PLAYBACK TIME OF AUDIO PART |
| S_AAGN | ADDITIONAL AUDIO GROUP NUMBER |
| AA_ENTN | AA_ENT NUMBER |

FIG. 34

EP0752702A2

6,097,237 Aug. 1, 2000

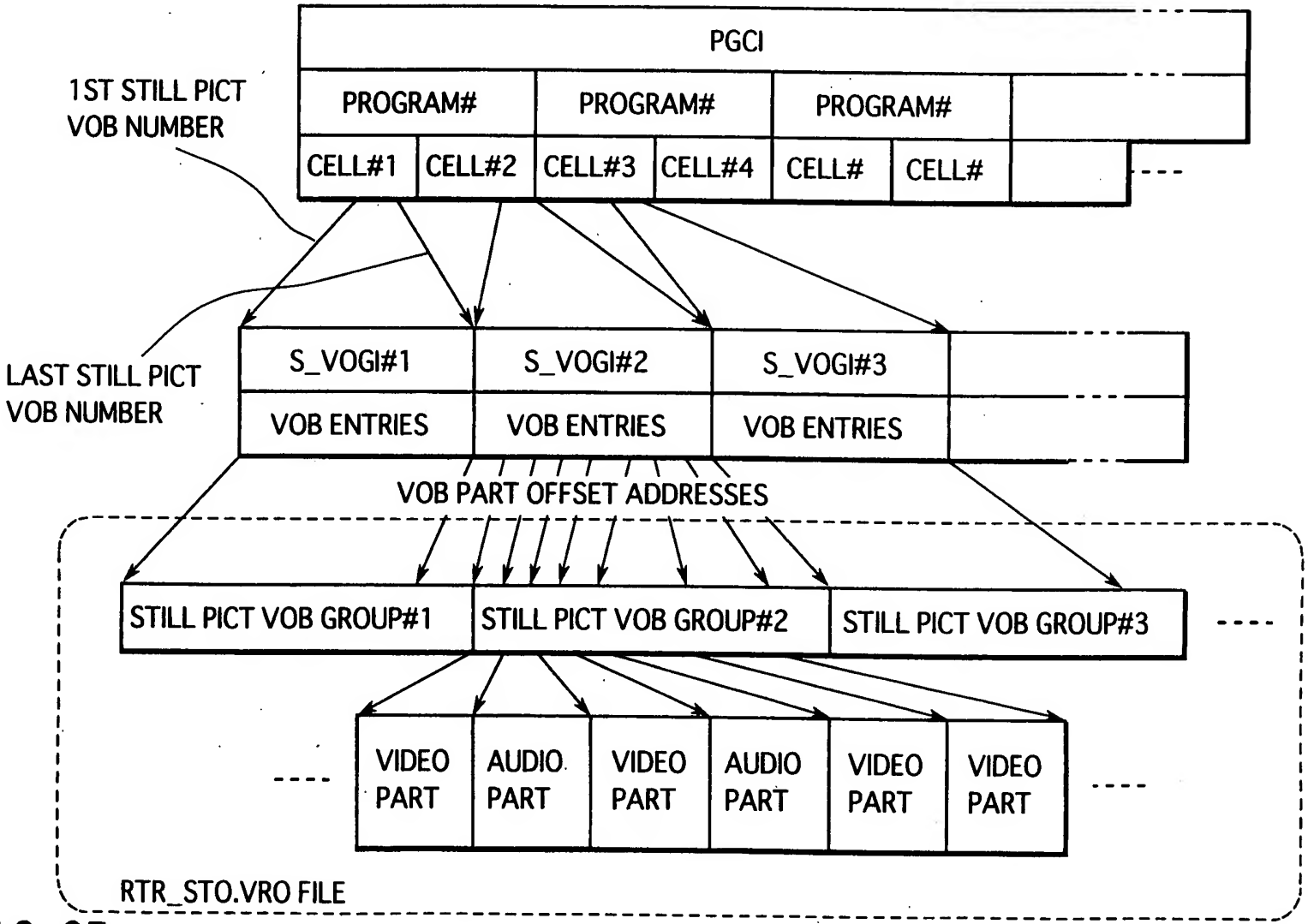



FIG. 35

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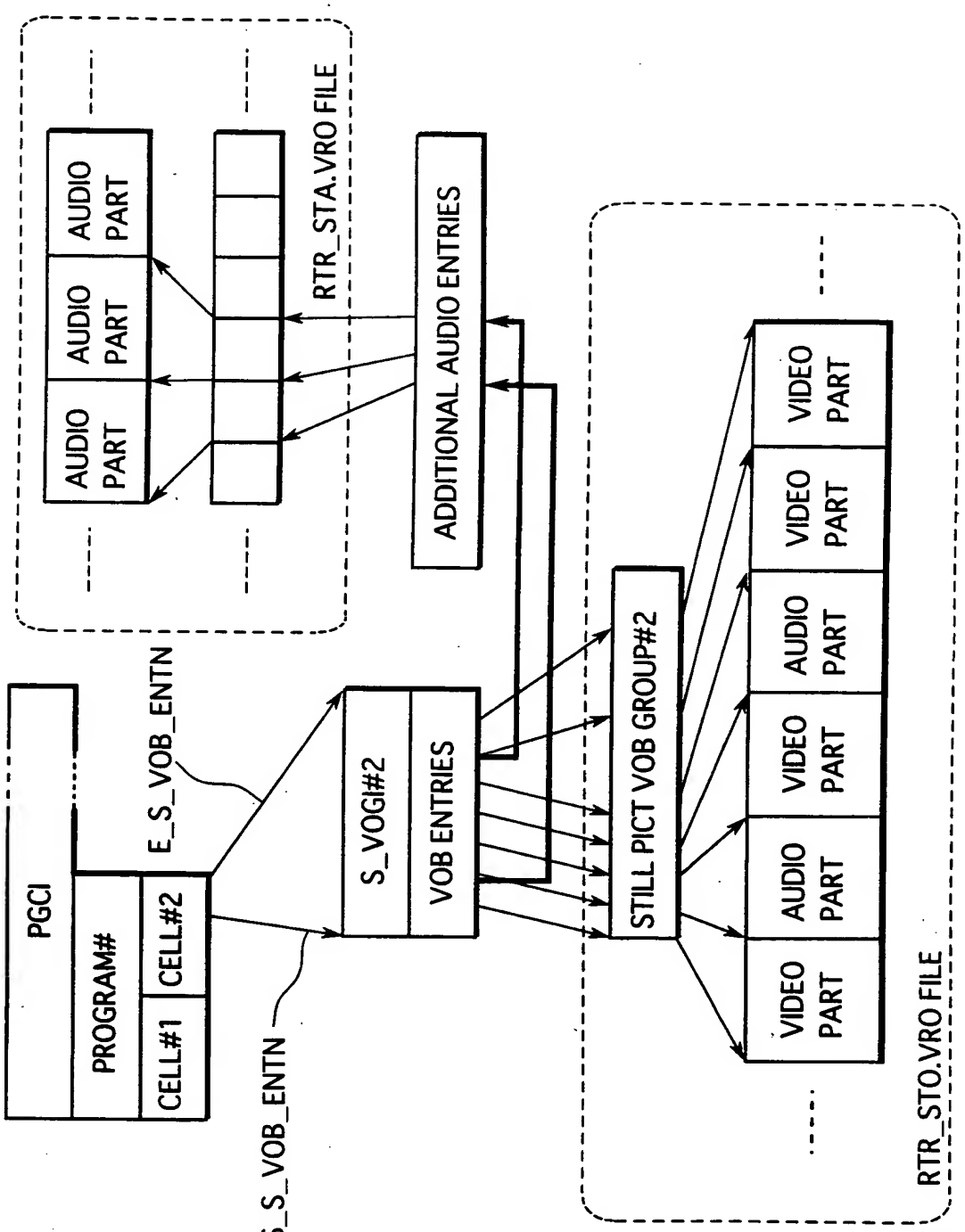
PGCI
PROGRAM#
CELL#1
CELL#2
E_S_VOB_ENTN
S_S_VOB_ENTN
S_VOGI#2
VOB ENTRIES
RTR_STA.VRO FILE
AUDIO PART
AUDIO PART
AUDIO PART
ADDITIONAL AUDIO ENTRIES
STILL PICT VOB GROUP#2
VIDEO PART
VIDEO PART
AUDIO PART
VIDEO PART
AUDIO PART
VIDEO PART
RTR_STO.VRO FILE

FIG. 36

206720 "77297001

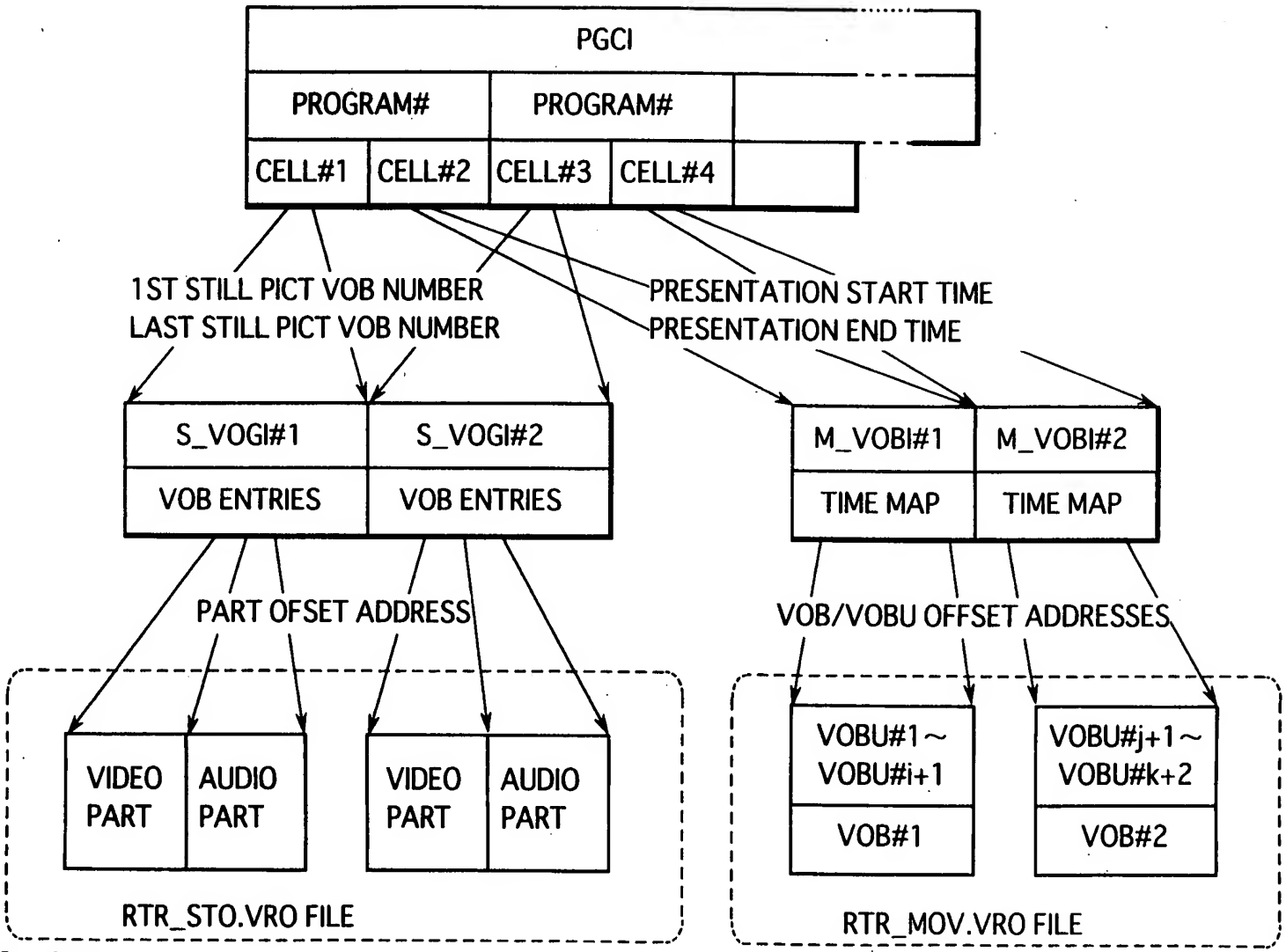


FIG. 37

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JP07629737 "02.1996

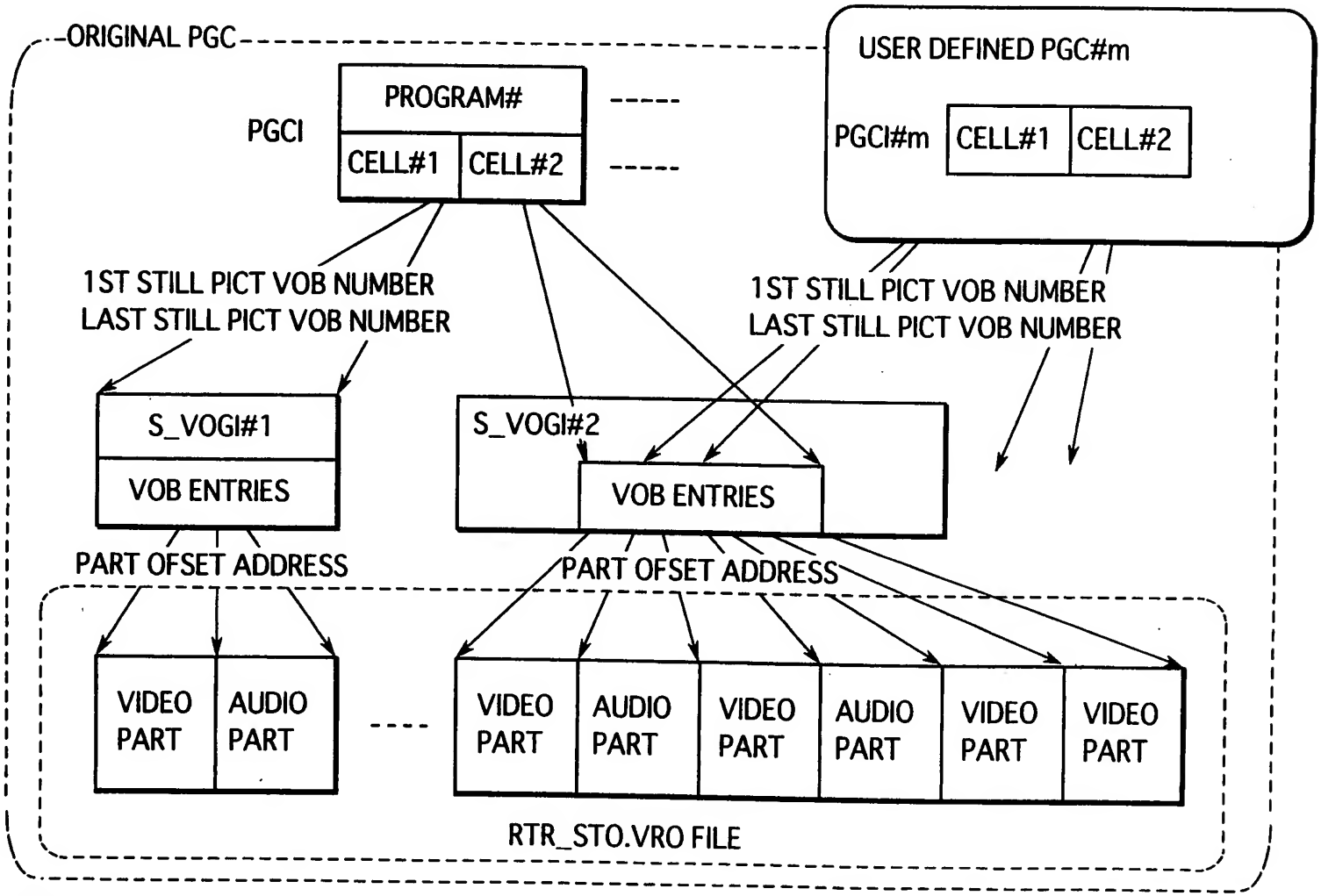


FIG. 38

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